

TO RETAIN MOISTURE

Question of Conservation Is of Prime Importance.

Cultivation Not Only Aids by Preventing Evaporation But Also Keeps Broken Surface That Catches Snow and Rain.

Agricultural college men tell us that it takes 45 tons of water to grow a bushel of wheat. Thirty bushels will use twelve inches in depth over an acre of land. For very obvious reasons, a twelve-inch rainfall would not be enough moisture to mature a 30-bushel crop if there were not some moisture already in the ground. During the hot and windy days of summer evaporation might amount to three inches or more in a week, if no means were used to prevent it. At this rate the whole year's precipitation might be lost in a month or two. At the very best, some of the soil moisture is bound to be lost through evaporation, a rainfall of, say, twenty inches, during the year does not guarantee that the crop will have that amount upon which to grow. Plow, harrow, and pack as we may, the air will pick up a good deal of the moisture that falls. When this work is done poorly, a much larger percentage of the precipitation escapes. The question, then, of conservation of soil moisture is of prime importance.

Practical conservation of the precipitation that reaches the soil in one



Excellent Potato Field in Semi-Arid Region.

form or another consists of preventing its escape through evaporation by obstructing this process at the soil surface. Surface tillage that forms a dust mulch is the most practicable means of doing this. This movement of soil moisture to the surface, from which point it is evaporated into the air, is accomplished by means of a physical law called capillarity. The disturbing of the soil at the surface breaks up the capillary connection and stops evaporation to a large extent. Hence, the value of surface cultivation. Numerous tests have shown that frequent cultivation of the soil in summer will prevent the evaporation of from seven to ten inches of water where the rainfall is not over thirteen inches. Thus, moisture that otherwise might escape into the air is kept in the soil where it can be used by the seed in hastening germination and in supplying water to the growing plant. Cultivation not only aids in conserving this moisture by preventing its evaporation, but it also prevents a broken surface which catches the rain and snow. It performs the double service of both gathering and retaining the rainfall. If we are to have thirty bushel wheat crops, there are many sections in the west where the question of moisture conservation must be given more careful attention.

SHELTER BELTS ARE USEFUL

Do Much to Prevent Soil Blowing Because They Interfere With Movement of Wind Near Surface.

In dry farming areas many farmers are troubled with soil blowing, sometimes to the extent of losing their entire crop. In many sections water comes within six feet of the surface so that the roots of most crops can reach moisture. While there is a scarcity of water, it seems almost necessary to follow dry farming methods to be successful. In areas where soil blowing occurs various methods might be followed to mitigate the bad effects. But it is almost impossible to eliminate them altogether.

Shelter belts do much to prevent soil blowing because they interfere with the movement of the wind near the surface of the ground. While it requires time for shelter belts to develop it is possible to get the same effect by plowing small fields and leaving the surface somewhat rough. It has been found that sandy soils blow more easily than heavier soils and those that contain a considerable amount of organic matter. The practice is followed in some sections across the field. These counteract the movement of the air near the surface and will do much to catch drifting soil and prevent more from starting. It is also a good plan to grow a border of corn rather thickly and let it stand. It will act as a grove or hedge and will prevent, in a measure, soil blowing.

RAISING CROPS ON SOD LAND

In Normal Seasons, Flax Is One of Best First Crops—Corn Will Make Fair Yields Ordinarily.

(By ALVIN MEYER, Colorado Agricultural College.)

Not all crops do well upon such a seed bed as sod land. Corn if a variety adapted to the locality, will make fair yields in ordinary seasons. The disk planter is better than the subsoiler, as it easily penetrates the soil. Thus it plants the seed in moist soil at a uniform depth. The corn is best planted in drills 18 to 22 inches apart in the row and three and one-half feet between the rows. Sod corn needs little further cultivation. It may be harrowed at first.

In normal seasons, flax is one of the best first crops for the sod land. The sod is prepared the same as for corn. The flax may then be drilled in with a press, single disk drill using from 25 to 35 pounds of seed according to quality. Usually flax should be planted about the middle of May.

Milo is a good feed crop for sod land at altitudes below 5,500 feet. It is planted in drills six to eight inches apart in the row. If the corn planter is not provided with proper plates, blank plates furnished with the planter may be used by drilling holes properly sized and spaced.

For fodder, cane and Kaffir do well. They are planted with the grain drill. The holes not wanted must be covered or stopped.

Stock melons and other melons grow well as sod crops. When properly handled, potatoes will do something. Where milo does well broom

POULTRY



FAVORITE BREED FOR EGGS

Leghorns Mature Quickly, Are Excellent Foragers, and Are the Best Layers.

If eggs are easier and cheaper to produce than meat and bring a better price, why are not the egg-laying breeds the ones to keep? says a writer in the Poultry Journal.

The Leghorns mature quickly, are



A Grand Male Bird, Leghorn.

good foragers, and are the best of layers—the pullets often laying when five months old. They stand confinement well in winter. Owing to their great activity, they are not so likely to have indigestion and bowel troubles as the larger breeds. As the Leghorns are not so heavily feathered, they are more easily kept free from lice.

Now that we can hatch and raise chicks with incubators and brooders, is it not the proper thing to have the "egg machines," or the laying breeds, also?

There are some noted strains of Plymouth Rocks and White Wyandottes that are heavy layers—strains built up by patient and painstaking work in selection and breeding from the best layers, so that they lay almost or quite as well as the Leghorns.

The farmer has not the time to trapnest his hens and to secure his best layers. And what is the need of it, when it is just as natural for the Leghorn to lay as it is for the Jersey cow to give us cream?

One hundred Leghorns can be kept on the feed and in the same amount of space required for 75 Plymouth Rocks, and I am sure the Leghorns will give better returns in money.

Anyone with a decided preference for a particular breed of fowls, as he would enjoy them more and take better care of them than of any other breed. After experimenting with several breeds, the Leghorns are my choice, and I have told why.

HANDY FOR POULTRY RAISERS

Little Device for Carrying Eggs May Be Made out of Ordinary Lath Nailed Together.

Here is a device for carrying eggs where they are delivered to customers in the city, writes A. J. Magee in the Farm and Fireside. It is made of ordinary plastering lath planed smooth and nailed together with small nails. Two strips are nailed together in V-shape for each corner. The bottom is made of thin board nailed to narrow strips on the inside of each side. The whole piece of wood as a handle. The carrier can be made to hold any number of cartons one desires to carry.



Carries Eggs to Market.

(Cartons hold one dozen each.) Pile the cartons up and measure them to get the inside measurements of the carrier. I have one holding 30 dozen and another holding 24 dozen.

Winter Feed for Poultry.

One of the best and most relished winter feeds for poultry is cabbage. Even though there be an abundance of other green vegetable matter, I should still strive to add some cabbage to the list. It is true that there is nothing quite so good for the hens as a growing crop, such as rye, over which they can range and thus combine exercise with food getting, and every effort should be made to provide it, but often space is too limited for such crops and dependence must be had altogether on substitutes that can be stored away.

Look After Growing Chicks.

The welfare of chickens must be looked after during the growing period, as no amount of pampering and petting at maturity will compensate for neglect then.

GUINEA MEAT IS DELICIOUS

When Matured Bird Cannot Be Excused by Any Chicken for a Pot Roast or Pie.

You have heard of guinea fowl, but did you ever taste it? If you like the delicious flavor of wild game, especially the prairie chicken, you are sure to enjoy a meal of guinea fowl.

When young, the guinea is more tender and more juicy than the prairie chicken, and is far superior to any other bird as a broiler or a fry. When matured they cannot be excelled by any chicken for a pot roast or pie. Their flesh is rather dark, but fine grained and very tender, with an exquisite gamey flavor. The eggs, while rather small, have a rich taste that most persons like. There is an ever-increasing demand for guinea in the larger cities for restaurant trade. There's profit in raising them.

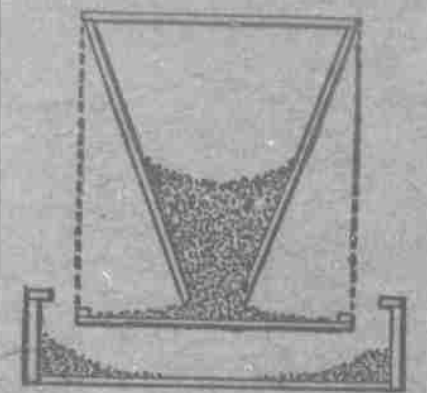
Guinea are not so servicable as hens when raised in close confinement, but if allowed the run of the farm they will practically raise themselves, with hardly any expense to their owners, and will return a profit in both eggs and meat. The guinea is naturally a wild bird, and will usually range in the wildest part of the country, so that it is usually difficult to find its nest. If guinea and turkey eggs are set at about the same time, and the young divided into flocks, half guinea and half turkey, when given to the brood hen, the guinea will remain with the other birds and will not be nearly so wild as when kept alone.

The feed for young guinea may be the same as for young turkeys. After three weeks they may be put on free range, feeding three times a day, with plenty of fresh water. They do not scratch like other fowls, and therefore are safe to have in the garden.

HANDY HOPPER FOR POULTRY

Implement May Be Made of Galvanized Iron or Wood, and Prevents Waste of Feed.

A handsome hopper for preventing hens from wasting their food may be made of galvanized iron or wood, as shown in the illustration. The hop-



Poultry Hopper.

per proper is hung about the lower box which may be emptied back into the hopper when desired.

Sprinkle Incubator Eggs.

One of the experiment stations has found that by sprinkling eggs during the last three days of artificial incubation, one-third more eggs were hatched, and the eggs that were sprinkled from the third day on gave about 10 per cent better hatch. Submerging the eggs did not seem to increase the hatch as much as sprinkling. It was also found that while it is easy to develop chicks in large, thick-shelled, dark, Brahma eggs, it is very difficult to get a good hatch.

No Sentiment in Hen.

There is no sentiment in a hen. Her only object in life is to get enough to eat. If she is given that and a warm, well-ventilated house to sleep in at night, a dry, sheltered place in winter, she will do the rest.

POULTRY NOTES

Watch the hens for superfluity fat. The poultry business is not all profits.

Be generous with fresh air and water and sunshine.

Lettuce is particularly well liked by chicks because of its tenderness.

It is easier to keep the hens' quarters clean than it is to fight disease. If cabbage is fed in too large quantities, the eggs may partake of its flavor.

Don't put off buying your breeding stock for the poultry yard till next spring.

Green food is one of the essentials for healthy fowls and for satisfactory egg production.

Have the hen yard border on the garden, so that the vegetables can be easily transferred.

The fact of the business is, the average farm flock produces about 120 eggs per hen each year.

The problem of getting green food for poultry in the winter is much more pressing than in summer.

Once a month paint the roosts with coal oil, using a broad paint brush, and pour a little into any cracks about the ends of perches.

Provide plenty of dry earth and coal ashes where the hens may dust themselves, and there is little danger of body lice in a clean house.

The busy hen in the scratching shed is the one that drops the eggs in your market basket during the winter months when eggs are highest.

Place a shallow pan with a little kerosene in it where the hens have to walk through it in entering their night quarters, and mites are not apt to give trouble.

TAKING CHANCES OTHERWISE.



Hoxe—He is exceedingly ill, but he is still holding his own.
Joax—He has to. There are two doctors with him all the time.

Woman's Way.

"A woman's convention, eh? What do women know about enthusiasm? Now at the last national convention we men cheered our candidates for an hour."

"That's all right," said his wife. "We throw kisses at ours for sixty-seven minutes by the clock."—Louisville Courier-Journal.

Man and Meter Both Unique.

A Kansas City man notified the gas company that his meter was running slow. Greater honesty hath no man than this.

MILLIONS OF FAMILIES are using SYRUP OF FIGS and ELIXIR OF SENNA

FOR COLDS AND HEADACHES, INDIGESTION AND SOUR STOMACH, GAS AND FERMENTATION, CONSTIPATION AND BILIOUSNESS, WITH MOST SATISFACTORY RESULTS.

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"And Again, My Brethren."

A certain small girl, wearily listening to a long sermon by a renowned cleric who had an odd habit of draying in his breath with a curious whistle, whispered to her mother that she wanted to go home. The mother, expecting the discourse to end momentarily, refused permission. The third time this happened the mother murmured in the child's ear that the preacher would soon stop now. But the child, nervous and despairing, answered her in a high falsetto: "No, mother, he is not going to stop. I thought so now for three times, but he has gone and bowed himself up again!"

The annual per capita fire waste in Europe averages 35 cents, while in the United States it amounts to \$2.51.

The man who hides his light under a bushel is sometimes surprised to find that the sun still shines.

FILES CURED IN 30 TO 40 DAYS
Your druggist will refund money if PAIN EXPELLER fails to cure any case of Rheumatism, Neuralgia or Prostrating Pains in 30 to 40 days. No.

The trouble with a good bit of reform is that it is badly in need of reforming.

Tell the dealer you want a Lewis' Single Binder straight to sugar.

The only time some people worry is when they worry other people.

Women's Secrets

There is one man in the United States who has perhaps heard more women's secrets than any other man or woman in the country. These secrets are not secrets of guilt or shame, but the secrets of suffering, and they have been confided to Dr. R. V. Pierce in the hope and expectation of advice and help. That few of these women have been disappointed in their expectations is proved by the fact that ninety-eight per cent. of all women treated by Dr. Pierce have been absolutely and altogether cured. Such a record would be remarkable if the cases treated were numbered by hundreds only. But when that record applies to the treatment of more than half a million women in a practice of over 40 years, it is phenomenal, and entitles Dr. Pierce to the gratitude accorded him by women, as the first of specialists in the treatment of women's diseases.

Every sick woman may consult Dr. Pierce by letter, absolutely without charge. All replies are mailed, sealed in perfectly plain envelopes, without any printing or advertising whatever, upon them. Write without fear as with our fee, to World's Dispensary Medical Association, Dr. R. V. Pierce, Pres., Buffalo, N. Y.

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Makes Weak Women Strong,
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FINEST QUALITY LARGEST VARIETY
They meet every requirement for cleaning and polishing shoes of all kinds and colors.



GIVE EDGE the only ladies shoe dressing that positively contains Oil, Resin and Polishes and shines like new. French, Italian, English, and all other styles of shoes, the "Whittemore's" shoe polish is the only shoe polish that will make your shoes shine like new. It is the only shoe polish that will make your shoes shine like new. It is the only shoe polish that will make your shoes shine like new.

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